

REMARKS

In the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office mailed April 13, 2006, the Patent Office found that this application failed to comply with the requirements of 37 C.F.R. 1.821-1.825. In particular, the Office states:

This application clearly fails to comply with the requirements of 37 CFR 1.821-1.825.

No further explanation is provided, but the paper further goes on to require a copy of "the 'Sequence Listing' in computer readable form."

Applicant respectfully disagrees that 37 C.F.R. 1.821-1.825 applies to the present application.

The Manual of Patent Examining Procedure §2422.03 states,

In those instances in which prior art sequences are only referred to in a given application by name and a publication or accession reference, they need not be included as part of the "Sequence Listing," unless an examiner considers the referred-to sequence to be "essential material," per MPEP §608.01(p).

The proteins referred to in this application fall squarely within this exempt category of prior art sequence information described above. The proteins referred to within the application (which the Examiner did NOT describe as "essential material" in the Notification of Missing Requirements) ***consist only of prior art proteins referred to by name and a publication or accession reference expressly as provided in the MPEP section above.*** Specifically, the sequence information found within the application is described below for the GLUT family of transporter proteins referred to in the application (and including publications for each protein from GLUT-1 through GLUT-13:

Details for the various GLUT proteins can be found for example for GLUT-1 in Mueckler et al (1985) *Science* 229, 941-985; and Fukumoto, et al (1989) *Diabetes* 37, 657-661. GLUT-2: Fukumoto et al (1989) *J. Biol. Chem* 264, 7776-7779; GLUT-3: Kayano et al (1988) *J. Biol. Chem* 263, 15245-15248; GLUT-4: Fukumoto et al (1989) *J. Biol. Chem*

264, 7776-7779; Buse et al (1992) *Diabetes* 41, 1436-1445; Chiaramonte, et al (1993) *Gene* 130, 307-308; and Choi et al (1991) *Diabetes* 40, 1712. For GLUT-5: Kayano et al (1990) *J. Biol. Chem* 265, 13276-13282; GLUT-6: Doege et al (2000) *Biochem. J.* 350, 771-776; GLUT-7: Waddell et al (1992) *Biochem. J.* 286, 173-177; GLUT-8: Carayannopoulos et al (2000) *Proc. Natl. Acad. Sci.* 13, 7313-7318; Doege et al (2000) *J. Biol. Chem* 275, 16275-16280; and Ibberson et al (2000) *J. Biol. Chem* 275, 4607-4612. For GLUT-9: Phay et al (2000) *Genomics* 66, 217-220; GLUT-10: McVie-Wyllie et al (2001) *Genomics* 72, 113-117; GLUT-11: Doege et al (2001) *Biochem J.* 359, 443-459; GLUT-12: Rogers et al (2002) *Am. J. Endocrinol. Metabol.* 282, E733-E738; and for GLUT-13: Uldry et al (2001) *EMBO J.* 20, 4467-4477.

(Application as filed, pp. 15-16).

Further (non-glucose) transporter proteins are identified in the application by name and/or accession number as follows:

Various transporter proteins responsible for transporting substances through membranes have already been identified in plants, and in some cases DNA sequences which code for such transporter proteins are available. cDNA sequences which code for plant sucrose transporters have been described, for example for potatoes (*p 62* and *StSUT1*) and spinach (*S21* and *SoSUT1*) (WO 94/00574; Riesmeier et al., (1993) *Plant Cell* 5:1591-1598; Riesmeier et al., (1992) *EMBO J.* 11: 4705-4713), for *Arabidopsis thaliana* (*suc1* and *suc2* genes; EMBL gene bank: Access No. X75365), *Plantago major* (EMBL gene bank: Access No. X75764), *L. esculentum* (EMBL gene bank: Access No. X82275) and *Nicotiana tabacum* (EMBL gene bank: Access Nos. X82276 and X82277).

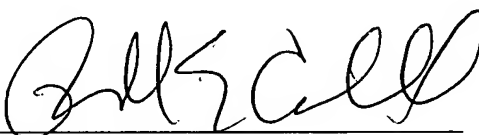
(Application as filed, p. 17).

CONCLUSION

Accordingly, for every transporter protein referenced in the application, a name and a publication or accession number is expressly provided. Pursuant to MPEP §2422.03, no sequence listing is required.

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